

Appl. No. 10/719,924
Response dated 8/14/2006
Reply to Office Action of 2/14/2006

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) A wet and dry weather water disinfection system, comprising:
a disinfecting chemical dispenser located proximate to a storm water management infrastructure
where said disinfecting chemical dispenser is configured to add a disinfection chemical into
water flowing through said storm water management infrastructure;
~~a mixing chamber wherein a disinfection chemical from the disinfecting chemical dispenser is~~
~~added to the water to be treated; and~~
a sensor configured to measure water characteristics attributable to said water flowing through
said storm water management infrastructure;
a control unit that controls the ~~an addition amount of said disinfection chemical added to the said~~
~~water to be treated~~ flowing through said storm water management infrastructure based on
said water characteristics of said water.
2. (canceled)
3. (currently amended) The wet and dry weather water disinfection system of claim-2 1,
wherein ~~the said~~ sensor to measure water characteristics is located upstream of ~~the said~~
disinfecting chemical dispenser.
4. (currently amended) The wet and dry weather water disinfection system of claim-3 1,
further comprising a ~~sensor in the mixing chamber~~ sensor configured to measure characteristics
of ~~the water mixed with the said~~ disinfecting chemical.
5. (currently amended) The wet and dry weather water disinfection system of claim-3 1,
further comprising a downstream sensor downstream of the mixing chamber configured to
measure ~~the chemically treated~~ said water's characteristics.

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6. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein the said control unit incorporates a feed-back protocol that incorporates an array of physical, chemical and/or biological parameters for efficiently disinfecting the said water flowing through said storm water management infrastructure.
7. (original) The wet and dry weather water disinfection system of claim 1, further comprising a power source selected from the group consisting of battery power, externally supplied power, and a solar power unit.
8. (currently amended) The wet and dry weather water disinfection system of claim 1, further comprising a communication unit that permits communication ~~between the said wet and dry weather water disinfection system and with~~ a distant management station.
9. (currently amended) The wet and dry weather water disinfection system of claim 8, wherein the said communication unit comprises at least one of a wireless telemetry unit, and wired communication unit for connection to a computer network.
10. (currently amended) The wet and dry weather water disinfection system of claim 8, wherein the said communication unit provides for at least one of remote adjustment of dosage rates, dynamic transfer of data to the said system to allow pre-administration of chemicals prior to a first flush event, remote system diagnosis, and remote inventory control.
11. (currently amended) The wet and dry weather water disinfection system of claim 1, further comprising a flow meter to measure ~~the a~~ flow rate of said water running through said storm water management infrastructure ~~the system~~.

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12. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein said sensor measures at least one of temperature, turbidity, pH, dissolved oxygen, bacterial count, and chemical residue level.

13. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the~~ said disinfecting chemical dispenser comprises a chemical storage container, a valve, ~~a motive means to move the disinfecting chemical from the storage container to the mixing chamber,~~ and a probe through which ~~the~~ said disinfecting chemical is injected into ~~the mixing chamber~~ said water running through said storm water management infrastructure.

14. (currently amended) The wet and dry weather water disinfection system of claim ~~14~~ 1 is ca, wherein ~~the~~ said disinfecting chemical dispenser comprises plurality of chemical storage containers which store feedstocks of precursor chemicals to ~~the~~ said disinfecting chemical.

15. (currently amended) The wet and dry weather water disinfection system of claim 1, further comprising a UV radiation source that illuminates ~~the solution of wastewater and chemical downstream of the mixing chamber~~ said water running through said storm water management infrastructure.

16. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the~~ said disinfecting chemical comprises chlorine dioxide.

17. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the~~ said disinfecting chemical comprises a solution of a peroxide or a peroxide precursor.

18. (currently amended) The wet and dry weather water disinfection system of claim 15, wherein ~~the~~ said disinfecting chemical comprises a solution of a peroxide or a peroxide precursor, and ~~the mixed peroxide and water to be treated solution~~ said solution mixed with said

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water running through said storm water management infrastructure is then photolyzed by the said UV radiation source.

19. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the said~~ disinfecting chemical comprises a solution of a persulfate ($S_2O_8^{2-}$) salt.

20. (currently amended) The wet and dry weather water disinfection system of claim 15, wherein ~~the said~~ disinfecting chemical comprises a solution of a persulfate ($S_2O_8^{2-}$) salt, and ~~the mixed ($S_2O_8^{2-}$)—stormwater said~~ solution is then photolyzed by the UV radiation source.

21. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the said wet and dry weather water~~ disinfection system is locatable in-line at a storm drain collection location.

22. (currently amended) The wet and dry weather water disinfection system of claim 1, wherein ~~the said~~ water disinfection system is provided as a bypass system, which further comprises a baffle to control ~~the~~ flow of water either directly through a water conduit or through ~~the said~~ water disinfection system.

23. (canceled)

24. (currently amended) The wet and dry weather water disinfection system of claim 1, further comprising a filtering system for capturing at least one of sediments, debris and hydrocarbons prior to treatment with ~~the said~~ disinfecting chemical.

25. - 53. (canceled)